

MEMS MODULAR SINGLE-MODE MATRIX OPTICAL SWITCH

DiCon's MEMS Modular Single-Mode Matrix Optical Switch is based on DiCon's industry proven, long-life, reliable MEMS 1xN optical switch components. Every input has a 1xN fiber optic switch, while every output has a Nx1 fiber optic switch. The output fibers of each 1xN are spliced to the N side of each Nx1 to allow any input to connect to any output, in a fully non-blocking optical cross-connect manner.



FEATURES

- High Reliability
- Proven MEMS Technology
- Lifetime > 1 Billion Switch Cycles
- Available in any MxN configuration up to 8x8

APPLICATIONS

When combined with other fiber optic components, matrix optical switches are useful to add redundancy to an optical network. They are also useful to share resources in test & measurement applications.



MEMS MODULAR SINGLE-MODE MATRIX OPTICAL SWITCH

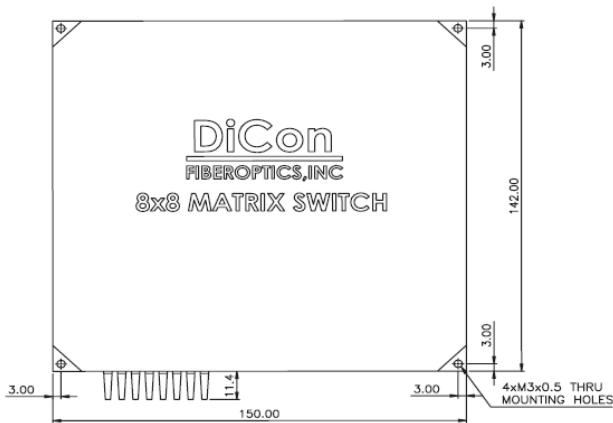
OPTICAL SPECIFICATIONS¹

PARAMETER		RATING
Insertion Loss ^{2,3}	4x4	1.4 dB max.
	8x8	1.6 dB max.
Crosstalk		-70 dB max.
Back Reflection		-50 dB max.
Switching Time		30 ms max.
TDL		0.4 dB max.
WDL ⁴		0.3 dB max.
PDL		0.15 dB max.
Repeatability ⁵		0.04 dB max.
Durability		10 ⁹ cycles min.
Optical Power		500 mW max.
Operating Temperature		-5 to 70°C
Storage Temperature		-40 to 85°C
Fiber Type		9/125 μm Single-mode

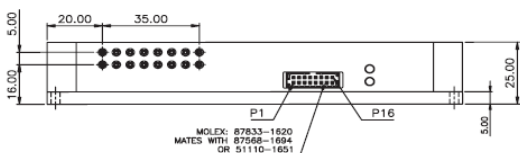
- Specifications are without connectors.
- IL is measured at CWL, 23°C.
- IL is for single-band. Dual-band add 0.2 dB.
- WDL is measured in a +/- 20nm range at 23°C.
- Repeatability is defined after 100 cycles.

MECHANICAL DIMENSIONS (Units: mm)

Top View



Front View



ORDERING INFORMATION

MX3 - □ - □ - □ - □ - □ - □

Product Code

MX3 MEMS Matrix

Switch Configuration

MxN MxN Non-Blocking (Specify M,N≤8)

Control Interface

I2C I²C
RS2 RS232

Wavelength Range

13 1290 - 1330 nm
15 1530 - 1570 nm
16 1570 - 1610 nm
13/15 1290 - 1330 nm & 1530 - 1570 nm
15/16 1530 - 1570 nm & 1570 - 1610 nm

Other wavelengths available upon special request

Fiber and Jacket Type

9/BF Corning SMF-28, Bare fiber
9/LT Corning SMF-28, Loose tube

Or other equivalent 9um Single-mode fiber

Connector Type

FC/SPC FC/SPC
FC/APC FC/APC
N NONE

Also Available: SC, SC/UPC, SC/APC, ST, ST/UPC, LC

Pigtail Length

1 1 Meter
X Specify X Meters

Tolerance is +/- 0.05 m

ELECTRICAL SPECIFICATIONS

PARAMETER	RATING
Latching Type	Non-latching
Control Type	I ² C or RS232
Vcc Voltage	12 VDC
Power Consumption	700 mW max.
Connector Type	Molex 87833-1620